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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,641	04/15/2004	Kevin Scott Smith	UNCC 02-020	9020
44231 7590 12/05/2007 KILPATRICK STOCKTON LLP - 46872 J. STEVEN GARDNER 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			EXAMINER GATES, ERIC ANDREW	
			ART UNIT 3722	PAPER NUMBER
			MAIL DATE 12/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,641	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> Eric A. Gates	<b>Art Unit</b> 3722	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,9-11,14 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,9-11,14 and 16-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2007 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 9, 10, 11, 14, 16, 17-23, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi (U.S. Patent 4,825,983).

4. Regarding claim 1, Nakanishi discloses a damping apparatus (as shown in figure 5) comprising: a first element 10 adapted to be coupled with a second element 20, the

first element comprising a structured surface 11 and the second element comprising a second surface 21, wherein the second surface comprises a receiving surface that is substantially uniform and wherein the structured surface comprises a plurality of depressions 112 and wherein the depressions are substantially hemispherical. While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

5. Regarding claim 4, Nakanishi discloses wherein the structured surface is adapted to be coupled with the receiving surface (through ball bearings 50 and vibration absorbing layer 30).

6. Regarding claim 9, Nakanishi discloses wherein the structured surface 11 further comprises a projection (projections formed in between depressions 112 as seen in figure 5).

7. Regarding claim 10, Nakanishi discloses wherein a viscous fluid 30 is disposed on the structured surface 11. The absorbing layer 30 of Nakanishi meets this limitation in two ways: 1) when the initial silicone gel fluid is poured on the surface (see column 4, lines 48-57), and 2) the final gel may be considered to be a viscous fluid because it exhibits non-elastic deformation (see column 5, lines 11-35).

8. Regarding claim 11, Nakanishi discloses an apparatus (as shown in figure 5) comprising: a first element 10 adapted to be coupled with a second element 50, the first element comprising a first surface 11; and means for damping 112, the damping means disposed on the first surface of the first element wherein the second element comprises a receiving surface (outer surface of ball bearing 50), wherein the first surface is

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adapted to be coupled with the receiving surface and wherein the first surface directly contacts the receiving surface (as seen by example in figure 28) and wherein the damping means comprises a plurality of depressions 112 disposed in the first surface.

While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

9. Regarding claim 14, Nakanishi discloses wherein the first surface is disposed adjacent to the receiving surface.

10. Regarding claim 16, Nakanishi discloses wherein the depressions are substantially hemispherical.

11. Regarding claim 17, Nakanishi discloses a method of damping vibrations (as shown in figure 5) in a first element 10 and a second element 20, wherein said method comprises: adapting a first element 10 to be coupled with a second element 20, the first element comprising a structured surface 11 and the second element comprising a second surface (outer surface of ball bearing 50), the second surface comprising a receiving surface (outer surface of ball bearing for receiving the ball bearing depressions in surface 11) and the structured surface comprising a plurality of depressions 112 and wherein the structured surface directly contacts the receiving surface (as seen by example in figure 28). While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

12. Regarding claim 18, Nakanishi discloses wherein the depressions are substantially hemispherical.
13. Regarding claim 19, Nakanishi discloses wherein the first surface is disposed adjacent to the receiving surface.
14. Regarding claim 20, Nakanishi discloses wherein the first surface is adapted to be coupled with the receiving surface.
15. Regarding claim 21, Nakanishi discloses disposing a viscous liquid 30 on the structured surface 11. The absorbing layer 30 of Nakanishi meets this limitation when the initial silicone gel fluid is poured on the surface (see column 4, lines 48-57).
16. Regarding claim 22, Nakanishi discloses wherein the structured surface further comprises a projection (projections formed in between depressions 112 as seen in figure 5).
17. Regarding claim 23, Nakanishi discloses wherein the structured surface is engaged with the receiving surface.
18. Regarding claim 26, Nakanishi discloses a damping apparatus (as shown in figure 5) comprising: a first element 10 adapted to be coupled with a second element 50, the first element comprising a structured surface 11 and the second element comprising a second surface (outer surface of ball bearing 50), wherein the second surface comprises a receiving surface (outer surface of ball bearing for receiving the ball bearing depressions in surface 11) and wherein the structured surface comprises a plurality of depressions 112 and wherein the structured surface directly contacts the receiving surface (as seen by example in figure 28). While the disclosure does not

distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

19. Regarding claim 27, Nakanishi discloses a damping apparatus (as shown in figure 5) comprising: a first element 10 adapted to be coupled with a second element 50, the first element comprising a structured surface 11 and the second element comprising a second surface (outer surface of ball bearing 50), wherein the second surface comprises a receiving surface (outer surface of ball bearing for receiving the ball bearing depressions in surface 11) that is substantially uniform and wherein the structured surface comprises a plurality of depressions 112 and wherein the depressions are substantially hemispherical, and wherein the structured surface 11 directly contacts the receiving surface (as seen by example in figure 28). While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

20. Claims 1, 4, 9, 11, 14, 16, 17-20, 22, 23, and 26-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Geissele et al. (U.S. Patent Publication 2004/0113133 A1).

21. Regarding claim 1, Geissele et al. discloses a damping apparatus comprising: a first element 34 adapted to be coupled with a second element 10, the first element comprising a structured surface (top surface of 34) and the second element comprising a second surface (bottom surface of 10), wherein the second surface comprises a receiving surface (bottom surface) that is substantially uniform and wherein the

structured surface comprises a plurality of depressions 80 and wherein the depressions are substantially hemispherical. While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

22. Regarding claim 4, Geissele et al. discloses wherein the structured surface is adapted to be coupled with the receiving surface.

23. Regarding claim 9, Geissele et al. discloses wherein the structured surface further comprises a projection 76.

24. Regarding claim 11, Geissele et al. discloses an apparatus comprising: a first element 34 adapted to be coupled with a second element 10, the first element comprising a first surface (top surface of 34); and means for damping 80, the damping means disposed on the first surface of the first element wherein the second element comprises a receiving surface (bottom surface of 10), wherein the first surface is adapted to be coupled with the receiving surface and wherein the first surface directly contacts the receiving surface and wherein the damping means comprises a plurality of depressions 80 disposed in the first surface. While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

25. Regarding claim 14, Geissele et al. discloses wherein the first surface is disposed adjacent to the receiving surface.

26. Regarding claim 16, Geissele et al. discloses wherein the depressions are substantially hemispherical.

27. Regarding claim 17, Geissele et al. discloses a method of damping vibrations in a first element 34 and a second element 10, wherein said method comprises: adapting a first element 34 to be coupled with a second element 10, the first element comprising a structured surface (top surface of 34) and the second element comprising a second surface (bottom surface of 10), the second surface comprising a receiving surface (bottom surface) and the structured surface comprising a plurality of depressions 80 and wherein the structured surface directly contacts the receiving surface. While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

28. Regarding claim 18, Geissele et al. discloses wherein the depressions are substantially hemispherical.

29. Regarding claim 19, Geissele et al. discloses wherein the first surface is disposed adjacent to the receiving surface.

30. Regarding claim 20, Geissele et al. discloses wherein the first surface is adapted to be coupled with the receiving surface.

31. Regarding claim 22, Geissele et al. discloses wherein the structured surface 34 further comprises a projection 76.

32. Regarding claim 23, Geissele et al. discloses wherein the structured surface is engaged with the receiving surface.

33. Regarding claim 26, Geissele et al. discloses a damping apparatus comprising: a first element 34 adapted to be coupled with a second element 10, the first element comprising a structured surface (top surface of 34) and the second element comprising

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a second surface (bottom surface of 10), wherein the second surface comprises a receiving surface (bottom surface) and wherein the structured surface comprises a plurality of depressions 80 and wherein the structured surface directly contacts the receiving surface. While the disclosure does not distinctly state that the depressions are formed by machining, this is being considered as a product-by process limitation. See MPEP 2113 [R-1].

34. Regarding claim 27, Geissele et al. discloses wherein the structured surface directly contacts the receiving surface.

35. Regarding claim 28, Geissele et al. discloses wherein the damping means is not a viscous fluid.

36. Regarding claim 29, Geissele et al. discloses wherein a viscous fluid is not disposed on the structured surface.

### ***Claim Rejections - 35 USC § 103***

37. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geissele et al.

39. Regarding claims 24 and 25, Geissele et al. discloses the invention substantially as claimed, except Geissele et al. does not disclose wherein the depressions are

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arranged in a non-uniform pattern. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the depressions 80 in any positions desired for the purpose modifying the rail pad spring rate and its damping characteristics, since it has been held that rearranging parts of an invention involves only routine skill in the art.

### ***Response to Arguments***

40. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

41. For the reasons as set forth above, the rejections are maintained.

### ***Conclusion***

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Gates whose telephone number is (571) 272-5498. The examiner can normally be reached on Mon-Thurs 8:45 - 6:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



EAG

26 November 2007



MONICA CARTER  
SUPERVISORY PATENT EXAMINER